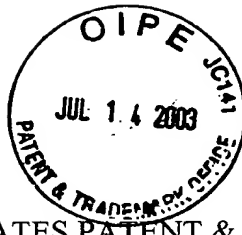


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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
JEAN-LOUIS BRAVET, ET AL. : EXAMINER: FERGUSON, L.  
SERIAL NO: 09/736,021 :  
FILED: JULY 25, 2001 : GROUP ART UNIT: 1774  
FOR: PLASTIC GLAZING SHEET WITH :  
ADDED OVERMOULDED PLASTIC  
MATERIAL

APPEAL BRIEF

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an appeal of Claims 1-21, which were finally rejected in the Official Action of January 14, 2003, all of the claims pending in this case. A Notice of Appeal was filed on May 14, 2003.

I. REAL PARTY OF INTEREST

The real party of interest in the appeal is Saint-Gobain Vitrage, having a place of business at 18, avenue d'Alsace, F-92400 Courbevoie, France.

II. RELATED APPEALS AND INTERFERENCES

The pending appeal in Serial No. 09/147,813, filed August 31, 1999, may have a bearing on the Board's decision in this appeal.

### III. STATUS OF THE CLAIMS

Claims 1-21 stand rejected and all are appealed.

### IV. STATUS OF AMENDMENTS

Claims 4, 12 and 21 have been amended subsequent to the issuance of the final rejection, in the Amendment and Request for Reconsideration filed with the present Appeal Brief. Claim 4, 12 and 21 have been amended to correct grammatical or typographical errors.

### V. SUMMARY OF THE INVENTION

The present claims are directed to a product comprising a sheet of plastic material, wherein the sheet is transparent at least in part, and on at least a part of the exterior surface of the sheet is disposed an overmolded plastic material (Claim 1). The sheet comprises a plastic material core with a skin disposed on at least one surface of the core. The plastic material core provides the mechanical properties of the product (page 4, paragraph 2). The skin layer may be relatively thin, and is comprised of a plastic material (page 4, paragraph 3). The skin is set back from the peripheral edges of the core, and therefore the peripheral edges of the core are not covered by the skin layer (page 5, paragraph 3). The skin layer comprises at least one plastic film having a scratch-resistant layer disposed thereon. In one embodiment, the scratch-resistant layer may be a substantially inorganic material (page 5, paragraphs 2 and 3).

### VI. ISSUES

The single issue in this appeal is:

whether Claims 1-21 are obvious under 35 U.S.C. § 103(a).

## VII. GROUPING OF CLAIMS

The claims do not stand or fall together. For the purposes of this appeal, the claims are grouped as follows:

- Group I: Claims 1, 2, 7, 8, 11, 12-16, and 18-20;
- Group II: Claim 3;
- Group III: Claims 4, 5, and 21;
- Group IV: Claim 6;
- Group V: Claim 9;
- Group VI: Claim 10 and 17;

## VIII. ARGUMENT

### Group I: Claims 1, 2, 7, 8, 11, 12-16, and 18-20

The rejection of Claims 1, 2, 7, 8, 11, 12-16, and 18-20 under 35 U.S.C. §103(a) over Endoh is respectfully traversed. The Examiner states (Advisory Action, continuation of section 5) that Endoh describes "the same components with the same function as the instantly claimed invention" for the following reasons:

- 1) the frame member disclosed in Figures 1, 2, and 4 of Endoh is "an overmolded plastic material";
- 2) the plastic layers of Figures 1, 2, and 4 of Endoh are "set back from the peripheral edges of the transparent plate member";
- 3) Endoh discloses a "hard coat" which is "made of plastic (col.6, lines 33-34)";
- 4) a "decorative member is made of plastic in the shape of a film (col.7, lines 56-58)";
- 5) Endoh "discloses the decorative member is secretly fixed within the mold relative to the plate member (col.7, lines 56-65)"; and

6) The "coated plastic layer is disclosed as improving scratch resistance (col.6, lines 33-34)".

Applicants respectfully submit that the Examiner has misinterpreted Endoh, and that the disclosure of Endoh fails to describe or suggest the claimed invention.

As indicated above, the Examiner has taken the position that the frame member of Endoh is "an overmolded plastic material" (Advisory Action, section 5). Consequently, the "decorative member in the shape of a film" at col.7, lines 56-58 of Endoh, cannot reasonably be considered to be the "film" component of the "skin" of the claimed invention, because it is disposed on the "frame member", not the "core", as in the claimed invention. Specifically, Applicants note that in Figure 1 of Endoh, the "decorative member" 28 (col.7, line 57) is incorporated into the frame member 16. In contrast, the claimed "film" component of the skin layer is "disposed on at least one surface of the *core*" (emphasis added), rather than on a surface of the overmolded plastic material, as in Endoh. Since the "core" and the "overmolded plastic material" are two separate components of the claimed product, and the "decorative member" of Endoh cannot reasonably correspond to the claimed "skin", the decorative member in the shape of a film in Endoh is completely different from the skin layer of the claimed product.

Applicants agree that Endoh describes a "plastic plate hard-coated to improve scratch resistance" (col.6, lines 33-34). However, the scratch-resistant layer of the claimed invention is disposed on the plastic film of the skin layer, rather than directly on the core. Thus, the claimed sheet of plastic material has at least three layers: the core, a plastic film disposed on at least one surface of the core, and a scratch-resistant layer disposed on the film layer. In contrast, Endoh simply describes a two-layered plastic plate in which the scratch-resistant layer is disposed directly on the plastic substrate. Thus, the hard-coated plastic plate of

Endoh lacks the film layer of the claimed invention. Accordingly, Endoh fails to support a *prima facie* case of obviousness. M.P.E.P. 2143.

Moreover, since “decorative member” of Endoh is completely different from the claimed “skin layer”, the combination of the hard-coated plastic sheet and decorative member of Endoh does not suggest the claimed product, because the scratch-resistant coating of Endoh is coated directly on the plastic sheet (i.e., core) and the “decorative member” is disposed on the frame member (i.e., overmolded plastic material), rather than a scratch-resistant layer disposed on a film layer, which in turn is disposed on a plastic core layer, as in the claimed invention. Thus, Endoh neither describes nor suggests the claimed invention.

Furthermore, as discussed above, the skin layer of the claimed invention is "set back from the peripheral edges of the core". Endoh fails to describe any kind of film or coating disposed on a plastic sheet which is "set back" from the edges of the plastic sheet. Instead, Endoh describes (e.g., in Figures 1, 2, and 4) a sheet, lacking a skin, which has a frame member (i.e. overmolded plastic material) disposed *on* the peripheral edge of the sheet. Thus, Endoh describes a completely different product, which lacks a description or suggestion of a skin layer “set back” from the peripheral edges of the sheet. Accordingly, the rejection of Claims 1, 2, 7, 8, 11, 12-16, and 18-20 should be REVERSED.

#### Group II: Claim 3

Claim 3 depends from Claim 2, and thus all of the arguments above which support the patentability of Claim 2 also support the patentability of Claim 3, and are incorporated herein. In addition, the following arguments apply specifically to the patentability of Claim 3.

In particular, the skin layer of the product of Claim 3 is not only set back from the peripheral edges of the core, but is also set back from the edges of the overmolded plastic material. Applicants note that since Endoh lacks a description or suggestion of a skin layer,

Endoh cannot reasonably also suggest a skin layer set back from both the peripheral edge of the core, and from the overmolded plastic material.

Furthermore, the “decorative member” in the form of a film, which the Examiner alleges teaches the claimed film layer, is described in Endoh as being a component of the frame member (i.e., an overmolded plastic material). Thus, even if the “decorative member”, *arguendo*, corresponded to the claimed film layer, it would clearly be in direct contact with the overmolded plastic material, rather than “set back” from it. Thus, by the Examiner’s interpretation of Endoh, Endoh would actually teach the *opposite* of what is claimed. Accordingly, Endoh fails to describe or suggest a film layer “set back” from the overmolded plastic material. Accordingly, the rejection of Claim 3 should be REVERSED.

#### Group III: Claims 4, 5, and 21

Claims 4, 5, and 31 ultimately depend from Claim 3, and thus all of the arguments above which support the patentability of Claim 3 also support the patentability of Claims 4, 5, and 21, and are incorporated herein. In addition, the following arguments apply specifically to the patentability of Claims 4, 5, and 21.

In particular, the product of Claims 4, 5, and 21 further comprise, in addition to the film layer and scratch-resistant layer, additional layers. In other words, the products of Claims 4, 5, and 21 comprise skin layers having three, four, or more layers. As discussed above, Endoh only describes a plastic sheet hard-coated to provide a scratch-resistant layer (col. 6, line 34), or alternative embodiments in which a *glass* substrate is coated with “a heat-reflecting film or a crack preventing film” (col. 6, lines 29-30; emphasis added). Thus, Endoh only describes “transparent plate members” having a *single* coating layer. Thus, there is simply no description or suggestion in Endoh of a product having a plastic core coated with

a film layer, a scratch-resistant layer, and the additional layers of Claim 4, 5, and 21.

Accordingly, the rejection of Claims 4, 5, and 21 should be REVERSED.

#### Group IV: Claim 6

Claim 6 depends from Claim 3, and thus all of the arguments above which support the patentability of Claim 3 also support the patentability of Claim 6, and are incorporated herein.

In addition, the following arguments apply specifically to the patentability of Claim 6.

In particular, the product of Claim 6 comprises a deposited or grafted hydrophobic/oleophobic agent incorporated into, grafted onto, or applied to a plastic support film applied directly to the scratch-resistant layer. Endoh lacks any description or suggestion of a hydrophobic/oleophobic agent at all, and therefore cannot reasonably suggest the incorporation of such an agent into or onto any particular layer of a window assembly.

Accordingly, the rejection of Claim 6 should be REVERSED.

#### Group V: Claim 9

Claim 9 depends from Claim 3, and thus all of the arguments above which support the patentability of Claim 3 also support the patentability of Claim 9, and are incorporated herein.

In addition, the following arguments apply specifically to the patentability of Claim 9.

In particular, the skin layer of the product of Claim 9 further comprises a stack of anti-reflective layers. Not only does Endoh fail to describe a skin layer comprising two or more layers, as discussed above, Endoh specifically describes surfaces coated with "heat-reflecting" (i.e., infra-red reflecting) films. "Reflecting" films reasonably have the opposite function of the claimed "*anti-reflective*" films. Thus, the window assemblies of Endoh teach away from the claimed product, having anti-reflective layers. Accordingly, the rejection of Claim 9 should be REVERSED.

Group VI: Claims 10 and 17

Claim 10 depends from Claim 3, and Claim 17 depends from Claim 13, and thus all of the arguments above which support the patentability of Claims 3 and 13 also support the patentability of Claims 10 and 17, and are incorporated herein. In addition, the following arguments apply specifically to the patentability of Claims 10 and 17.

In particular, the product of Claim 10 comprises an electrically-conductive network. Endoh lacks any description of a product having a skin layer further comprising an electrically-conductive network. In the Official Action of January 14, 2003, the Examiner argues that "Endoh discloses a metallic mold (col.8, line 59) which is the basis for an electrical conductive network". However, Applicants fail to understand how the metallic mold in which the window assembly of Endoh is *formed* could be considered to be equivalent to an electrically-conductive network which is a component of the claimed product. Applicants agree that a metallic mold would likely be electrically conductive. However, since the mold in which a window assembly is formed does not conventionally become a component of the window assembly, itself, the mold of Endoh cannot reasonably be considered to be the "electrically conductive network" of the claimed invention.

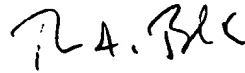
Furthermore, Endoh lacks any description or suggestion of a "metal screening printing" process, indeed any process for forming an electrically conductive network. Accordingly, the rejection of Claims 10 and 17 should be REVERSED.



Applicants respectfully submit that the application is now in condition for allowance,  
and that all of the rejections should be REVERSED.

Respectfully submitted,

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## APPENDIX I: APPEALED CLAIMS

Claim 1 (Previously Amended): A product comprising a sheet of plastic material, wherein the sheet is transparent at least in part and on at least part of the exterior surface of the sheet is disposed an overmolded plastic material,

wherein the sheet comprises a plastic material core, and a skin disposed on at least one surface of the core and set back from the peripheral edges of the core, and the skin comprises at least one plastic film having a scratch-resistant layer disposed thereon.

Claim 2 (Previously Amended): A product according to claim 1, wherein at least part of the peripheral edge of the sheet is encapsulated by the overmolded plastic material.

Claim 3 (Previously Amended): A product according to claim 2, wherein the skin is set back from the edges of the overmolded plastic material.

Claim 4 (Previously Amended): A product according to claim 3, wherein the skin has a thickness that is at most 500  $\mu\text{m}$  and further comprises one or more films of thermoformable plastic material and at least one functional layer.

Claim 5 (Previously Amended): A product according to claim 4, wherein the thermoformable plastic material is selected from the group consisting of polycarbonate, polypropylene, poly(methyl methacrylate), ethylene/vinyl acetate copolymer, poly(ethylene terephthalate), polyurethane, polyvinylbutyral, and cycloolefin copolymer.

Claim 6 (Previously Amended): A product according to claim 3, wherein the skin further comprises a hydrophobic/oleophobic agent which is incorporated into the scratch-resistant layer, grafted onto the scratch-resistant layer, or deposited on a plastic support film which is applied directly to the scratch-resistant layer.

Claim 7 (Previously Amended): A product according to claim 3, wherein the skin further comprises, over all or part of its surface, a decorative and/or masking layer.

Claim 8 (Previously Amended): A product according to claim 3, wherein the skin further comprises one or more optically selective layers.

Claim 9 (Previously Amended): A product according to claim 3, wherein the skin further comprises a stack of antireflective layers.

Claim 10 (Previously Amended): A product according to claim 3, wherein the skin further comprises an electrically conductive network.

Claim 11 (Previously Amended): A product according to claim 3, wherein the core comprises a thermoplastic material selected from the group consisting of polycarbonate, poly(methyl methacrylate), ethylene/vinyl acetate copolymer, poly(ethylene terephthalate), polyurethane, cycloolefin copolymer, and an ionomeric resin; a thermosetting or thermally cross-linking polyurethane, unsaturated polyester, or ethylene/vinyl acetate copolymer; or a plurality of layers of one or more of the thermoplastic or thermosetting or thermally cross-linking materials.

Claim 12 (Previously Amended): A product according to claim 2, wherein the overmolded plastic material comprises one or more elastomeric substances.

Claim 13 (Previously Amended): A process for preparing the product of claim 1, comprising:

holding one or two skins, optionally thermoformed, at the bottom of a single mold, then

injecting a first and then at least a second plastic material into the single mold.

Claim 14. (Original): A process according to claim 13, comprising an operation of transfer of the product of injection of the first plastic material by rotation from a first die, in which the injection of the first plastic material was achieved as the first step, into a second die used for subsequent injection of the second plastic material.

Claim 15 (Previously Amended): A process for preparing the product of claim 1, comprising injecting a first plastic material into a first mold and then transferring the resulting injection molded first plastic material into a second mold, and then injecting a second plastic material into the second mold.

Claim 16 (Previously Amended): A process according to claim 13, wherein said holding is carried out by suction and/or blowing and/or electrostatic effect.

Claim 17 (Previously Amended): A process according to claim 13, further comprising initially forming an electrically conductive network by metal screen printing.

Claim 18 (Previously Amended): A glazing for transportation vehicles or for buildings comprising the product of claim 1.

Claim 19 (Previously Added): A product according to claim 7, wherein the decorative and/or masking layer is positioned directly under the support film of the scratch-resistant layer.

Claim 20 (Previously Added): A product according to claim 12, wherein the elastomeric substance is a thermoplastic.

Claim 21 (Previously Added): The product according to claim 4, wherein the skin has a thickness of 50 to 300  $\mu\text{m}$ .

## APPENDIX II: PROPOSED FINDINGS OF FACT

1. Endoh does not describe or suggest the “skin layer” of the claimed product.
2. Endoh does not describe or suggest the “plastic film” of the claimed product.
3. Endoh does not describe or suggest a skin layer “set back” from the peripheral edges of the core layer.
4. Endoh does not describe or suggest a skin “set back” from the peripheral edges of the core layer, and “set back” from the overmolded plastic material.
5. Endoh does not describe or suggest a plastic sheet coated with more than one layer.
6. Endoh does not describe or suggest a hydrophobic/oleophobic agent.
7. Endoh does not describe or suggest a hydrophobic/oleophobic agent incorporated into, grafted onto, or applied to a plastic support film applied directly to a scratch-resistant layer.
8. Endoh does not describe or suggest a product having “*anti-reflective*” films.
9. Endoh does not describe or suggest a product having an electrically conductive network.
10. Endoh does not describe or suggest a process of forming an electrically conductive network by metal screen printing.
11. Endoh does not describe or suggest a process for preparing the claimed product.